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DEPARTMENT OF AGRICULTURE

SANDYLOAM

Garden Lilies

Autumn -- 1947

ALAN AND ESTHER MACNEIL
SPOONERVILLE ROAD
NORTH SPRINGFIELD, VERMONT

TERMS

Due to varied growing conditions over which we have no control it is not possible for us to place any guarantee on bulbs other than that they are true to name and will arrive in good condition.

Remittance should accompany order in form of draft, check or money order.

All prices include prepaid postage or express to destination in the U. S. or Canada east of the Rocky Mountains. Customers living in the far West are requested to add 5% to the total cost to help meet shipping charges.

Prices are based on the assumption that orders received will amount to \$2.50 or more. While we are happy to fill smaller orders, they are expensive to handle, and on these a 25¢ service charge should be added.

Six bulbs of any one variety and size furnished at the dozen rate.

* * * * *

This catalogue is being sent to our regular customers and old gardening friends as heretofore. Others wishing a copy should enclose 25c with their request. This cost may be deducted when bulbs are ordered.

A FOREWORD FROM

Sandyloam

This year we are offering a somewhat smaller list of garden lilies than heretofore. The reasons are several: We are withholding stocks of **L. Fire King**, **Scottiae** hybrids, **Sargentiae**, **Hurricane**, **T. A. Have-meyer**, and a number of others. The demand for these is so great and constant that there has never been an opportunity to work up really appreciable stocks and actual propagating material is getting dangerously low. Bulbs of these outstanding lilies are therefore being held for propagation so that in a year or two we can meet the need of the American gardener for them.

We have eliminated some Burmese and Pacific Coast species on which delivery is at present uncertain. We felt we should not whet the appetite of the gardener for them and then fail to make delivery. We are omitting those European lilies which are not good growers on this side of the Atlantic and are including only those which are reliable in American gardens. Also, cut from our list are a number of forms which are not distinctive, or for one reason or another, not as good as some of the newer hybrids which are replacing them.

On the other hand we are adding to our list a number of very choice lilies native to Japan and Korea, which have not been available in this country since 1941. These include **L. auratum platyphyllum**, **L. cernuum**, **L. japonicum**, **L. rubellum**, and the various forms of **L. speciosum**. These lilies, plus collected wild bulbs of **L. auratum**, will probably arrive from our old collector in mid to late December. We shall ship them, on arrival, to those gardeners who can plant at that time. The bulk of these bulbs, however, will be held here for delivery in early spring.

Our new book, Garden Lilies, published by Oxford University Press, has received unanimously enthusiastic reviews throughout the country. We shall be happy to accept orders. It is priced at \$3.50.

INTRODUCTIONS

The following list of lilies is new to our catalogue this season and those starred (*) are new to commerce. We are delighted to present them to American gardeners.

L. DUNKIRK

L. iridollae*

L. REGALE, FREIMANN'S PINK FORMS*

L. iridollae is a new species found in the wild by Mrs. J. Norman Henry, well-known American field botanist.

BIOGRAPHICAL NOTES

SAMEL L. EMSWELLER was born in 1898 at Tarentum, Pennsylvania. His undergraduate work was in the College of Agriculture at the University of West Virginia where he majored in Horticulture. Subsequently he attended the University of California where he was given his Ph. D. in 1932. In California he majored in Genetics and Cytology.

Dr. Emsweller was Assistant Professor at the University of California until 1935 when he came to the U. S. Department of Agriculture as Principal Horticulturist in charge of Floricultural and Ornamental Plant Investigations. At present he is directing this program of the Department from the Plant Industry Station at Beltsville, Maryland.

While in California he developed a strain of rust resistant snapdragons and worked on other flowers. At Beltsville, he has made a real contribution to our knowledge of the genus *Lilium* and has also worked extensively with chrysanthemums. The hybridizing program at the Field Station is extensive, and fine new things are expected from there during the coming years.

Dr. Emsweller married Frances P. Fitzgerald in 1920. They have two children, Eugene S., aged 20 (a G. I. attending the University of Maryland), and Francis T. (who likes horses).

E. F. PALMER is considered by many authorities to be the greatest plantsman on the continent. He was born in British Columbia in 1891 and attended school in Victoria. After graduating from college he plunged directly into his agricultural work, primarily the breeding of fruits and vegetables. In 1915 he was appointed Director of the Horticultural Experiment Station at Vineland, Ontario, the position which he holds at the present time.

His work with gladioli is famous and he was awarded the North American Gladiolus Council Achievement Award in 1946, the first time it was offered. Likewise he is the holder of the New England Gladiolus Society Gold Medal for Advancement of Gladiolus. Lilies have interested him since 1934 and he has developed a number of distinct and outstanding hybrids, representing years of work and selection. These will be introduced shortly. In addition to the awards already mentioned, Mr. Palmer has been given the Massachusetts Horticultural Society's highest honor, the Thomas Roland Medal, the Carter Medal of the Canadian Horticultural Council, and the Ontario Horticultural Association's Award for horticultural service.

GARDEN LILIES

AMABILE (Korea) This is a brilliantly colored dwarf variety. It bears from 4 to 6 grenadine-red black-spotted flowers of Turk's cap shape. It grows from 1½ to 2½ feet and will blossom from mid to late June¹. Splendid for a splash of color in the rock garden or early border. Plant 6 inches deep.

Each 40c Dozen \$4.25

AMABILE LUTEUM We offer the true very rare form with attractive yellow flowers. Plant 4 to 6 inches deep. Not fastidious about soil or location. This is one of the loveliest of all lilies and has earned a generous corner in every garden.

Stock limited.

Each \$2.25 Dozen \$24.00

AURATUM (Japan) This is an exotic beauty with immensely fragrant open-trumpet shaped flowers frequently as large as a dinner plate. They are white with a gold band down the center of each petal and the entire flower is flecked with crimson. Mid August to September is the blossoming time and they grow from 4 to 6 feet or taller. Plant 8 to 12 inches deep.

Each 85c, \$1.00 Dozen \$9.25, \$10.50

AURATUM, LATE FLOWERING FORM This form, which starts to open when *L. auratum* is going by and continues well into October at Sandyloam, is a decided addition to the autumn garden. Though there is not the same degree of color variation as in *L. auratum*, the blooms are large, and the plants are normally much taller than in the type.

Each \$1.00, \$1.35 Dozen \$10.50, \$14.50

AURATUM PLATYPHYLLUM This showy form flowers a week to ten days earlier than the type. The plants are generally not quite so tall, much more stocky and with broader leaves. The blooms are larger, more massive, slightly pendant or tilted, and somewhat hooded—in contrast to the wide-open flowers characteristic of the type.

Each \$1.25, \$1.75 Dozen \$13.50, \$19.00

BACKHOUSE HYBRIDS A group raised by the late Mrs. R. O. Backhouse and a priceless addition to the garden. The individual blooms though not large are charming and are Martagon shaped, growing on a long spike. They are difficult to classify as to color for, actually, they are variable and iridescent, ranging from pale ivory through the golds, pink, mauve, apricot, orange—all variously flushed and marked. An excellent group for the garden as they are not particular as to soil or location, establish well and are quite immune to mosaic. Height 5 to 6 feet. Plant about 6 inches. Late June to early July flowering. Un-named seedlings.

Each \$2.00 Dozen \$22.00

BROCADE One of the finest of the named hybrids. The flowers are orange-yellow with pink marbling and maroon spots. A free-flowering lily and a vigorous grower. We are indeed fortunate to be able to list it.

Each \$3.00

¹ Flowering dates given for all lilies are for central New England. The periods will naturally vary in other climates.

MRS. R. O. BACKHOUSE This is one of the most attractive and probably the most vigorous of the entire group. There are a great many beautifully colored Martagon-shaped blooms to a stalk. The interior of the petals is ivory overlaid with a transparent flush of gold and delicately flecked with reddish-purple. The reverse of the petals is a deeper yellow shaded with greenish-orange though the reverse does not show when the blooms are expanded. Plant 6 to 8 inches. Each \$3.50

SUTTON COURT Similar to Mrs. R. O. Backhouse in form but of a deeper tone. Pale, glittering, canary yellow. Each \$5.00
Stock very limited.

Note: See Martagon-Hansonii hybrids.

BELLINGHAM HYBRIDS See L. Shuksan

BRENDA WATTS See Preston hybrids.

BROCADE See Backhouse hybrids.

BROWNII (China) The true variety of Brownii is rarely beautiful and has been appropriately described as "the best tailored of all flowers". It bears from 2 to 4 large, trumpet-shaped and delicately fragrant blossoms a pure waxy white on the inside with chocolate brown stamens and pistil. The outside of each petal is marked by a band of purplish brown. This species is best grown where it will get shade part of the day. Its normal height is about 3 feet and it blossoms in late June. Plant 8 to 10 inches deep.

Stock very limited. Each \$2.00 Dozen \$22.00

CANADENSE Our native meadow lily and a lovely thing it is, with graceful drooping bell-shaped flowers in golden yellow or orange-red. It grows from 3 to 7 feet and does best in a moist situation in partial shade. Late June. Plant from 6 to 8 inches deep.

Collected bulbs.

Each 30c Dozen \$3.25 Hundred \$26.00

CANADENSE GOLDEN RULE See Mrs. Henry's Rare Native Lilies.

CANDIDUM (Europe) The beautiful Madonna Lily is well known. It is a moderately tall, short-trumpet pure white lily with a delicious fragrance. It blooms at the same time as Delphinium Belladonna and the combination of the two is traditional. Height 4 to 5 feet. August and September delivery only. Plant early, 3 inches deep in full sun.

We offer American grown bulbs.

Each 50c, 80c, \$1.10
Dozen \$5.50, \$8.50, \$12.00
Hundred \$44.00, \$68.00, \$96.00



L. auratum



L. Canadense

CATESBAEI LONGII See Mrs. Henry's Rare Native Lilies

CENTIFOLIUM HYBRIDS A group of glorious trumpet lilies of mixed parentage, with the blood of the rare and striking *L. centifolium* dominant. The fragrant trumpets are immensely large, white, with a flash of yellow in the throat, and the reverse is stained from rose through bronze to green. Mid-July flowering. Height 4 to 6 feet. Plant 8 to 10 inches. Splendid, mosaic-free bulbs. Each 65c, 80c Dozen \$7.00, \$8.75

CERNUUM (Korea) This is one of the most charming lilies in existence, with its small, pinkish-lavender Turk's cap blooms on two-foot stems. It is in flower for as long a period as any lily we know and holds the lovely color well, throughout the entire span of bloom. Early July flowering. Plant 3 to 4 inches deep. Each 85c Dozen \$9.25

CONCOLOR (Korea) This lily is frequently compared to *L. tenuifolium* though the resemblance is actually very slight. In *L. concolor* the blooms are upright rather than pendant, are wide-open and delicately star-shaped rather than recurved, and they are a deeper tone of scarlet. The plant itself is somewhat taller, with broader slightly hairy leaves and stem. It flowers a few weeks later than *L. tenuifolium* and is a most charming lily, one of our favorites. Plant 4 to 6 inches. Each 25c Dozen \$2.50

CORONATION See Preston hybrids.

DALHANSONII A very handsome lily and one of the finest hybrids we have. The color is rare, a glossy purple brown that takes on a deep mahogany red with the sun shining through it. Plant 8 inches deep in full sun or partial shade. Each \$3.50

DAURICUM var. WILSONI A dwarf growing variety, soft apricot flushed gold and spotted with brown. The flowers are larger and more widely expanded than in the type *L. dauricum*. July flowering. Plant 6 to 8 inches. Each 60c Dozen \$6.50

DAVIDI A striking lily that has been neglected in American gardens. The plant grows to 6 feet and bears a raceme of brilliant red Turk's cap blooms. The habit is graceful and the stature and color make it outstanding no matter what else is in flower at the time. Early July. Plant 6 to 8 inches. Each 65c Dozen \$7.00

DAVIDI var. WILLMOTTIAE This is one of the Orient's finest contributions to our gardens. The deep orange-red flowers grow on a pyramidal raceme. As many as 20 of the Martagon-shaped blossoms are carried on the graceful 5-foot stems. It blossoms in mid-July, has a strong constitution, is easily established. Plant 8 to 10 inches deep. Each 60c Dozen \$6.50

DUNKIRK A vigorous new hybrid by F. L. Skinner and an outstanding plant, which grows to 4 feet tall and bears a number of outward-facing deep blood-red flowers. The color is distinctive. The blooms are slightly flattened and the tips of the petals somewhat recurved. July flowering. Plant 4 to 5 inches. Awarded a First Class Certificate by the Massachusetts Horticultural Society July 9, 1947. Each \$7.50

EDNA KEAN See Preston hybrids.

FORMOSANUM (Formosa) This is a splendid, very late trumpet lily. It somewhat resembles *L. regale* but blooms in late September or even October. The trumpets are longer and somewhat more constricted than *L. regale*. Height 4 to 6 feet.

Each 45c Dozen \$5.00

FORMOSANUM, INTERMEDIATE FORM These are crosses of *L. formosanum*, *Pricei* with *L. formosanum*, and the resultant hybrid selfed or crossed back with Price's form. They bloom just after *L. regale* and average 30 inches in height. Plant 5 to 6 inches.

Each 60c Dozen \$6.50

FORMOSANUM, PRICEI A dwarf white trumpet lily that starts into bloom at the very beginning of August. It rarely grows more than a foot high.

Each 60c Dozen \$6.50

GRACE MARSHALL See Preston hybrids.

GRAYI (N. Carolina) This is one of our most delightful and individual native plants. It grows to four feet tall and bears racemes of brilliant scarlet thimble-shaped blooms. It is at its best in a rather moist location in partial shade. Plant 6 inches deep. July flowering.

Each 75c Dozen \$8.25

GREEN MOUNTAIN HYBRIDS In the fall of 1942 Sandyloam was exceedingly fortunate in purchasing what was probably the finest private collection of trumpet hybrid lilies in the United States. These hybrids, though tested in the garden of the hybridizer for years, had not previously been available to gardeners. They were produced by the late Dr. L. Horsford Abel, and are the result of crossing and recrossing the finest of the following trumpet lilies: *L. princeps* George C. Creelman, *L. princeps* Shelburne hybrid, *L. Crow's* hybrids, and *L. centifolium*.

The buds range from greenish sulphur through bronze green and pink. Some of the flowers are long and tubular, while others are short and wide open. The interiors are pure white or cream, with yellow, pale orange, dark orange, or greenish throats. The anthers range from yellow, brown to dark brown. One of the outstanding characteristics of the group is that unlike most forms of *L. regale* the blooms are scattered along the stem at intervals and open gradually over a period of time, thus being in bloom from three to four weeks in mid-summer. The plants range in height from 3½ to 6 feet. Plant 8 to 10 inches deep.

Especially fine bulbs. Each \$1.10, \$1.60 Dozen \$12.00, \$17.50

GUINEA GOLD A *Martagon-Hansonii* hybrid that inherits the splendid constitution of both parents. Pink buds make a fine contrast with the open flowers which are yellow, thickly spotted with brown. Holds its color best in light shade. June flowering. Height 5 feet. Plant 6-7 inches deep. Flowering bulbs.

Each \$3.00 Dozen \$32.00

HANSONII (Korea) This is considered one of the best garden lilies because of its charm and ease of culture. Its Martagon-shaped blossoms are a rich cadmium yellow, spotted purplish-brown. It comes early — late June — and grows from 4 to 6 feet tall. It will hold its lovely color best if planted 8 to 10 inches deep in partial shade.

Each \$1.20 Dozen \$13.00

HENRYI (China) This is another vigorous and dependable lily. It comes into blossom just before the *speciosums* in mid to late August and carries as many as twenty flowers on 5 to 8 foot stems. The flowers though not as large as the *speciosums* are the same frilly recurved shape and are a soft orange-yellow with brown spots. The foliage is excellent but the plant is apt to require staking. Plant 9 to 10 inches deep.

Each 40c, 50c Dozen \$4.50, \$5.50

IRIDOLLAE See Mrs. Henry's Rare Native Lilies.

ISABELLA PRESTON A new hybrid developed by Mr. Ralph M. Warner. The pollen parent is unknown but the maternal parent was a form of *L. umbellatum*. It is a striking plant with star-shaped blooms forming a graceful raceme. The blooms are outward facing with a slight tilt upwards and are a vivid orange in color tipped with tangerine red. The plant grows to 4 feet and appears to be an easy and completely charming garden subject. July flowering. Plant 6 to 8 inches. Each \$7.50

JAPONICUM (Japan) This is the most beautiful of the pink trumpet lilies. The blooms are the size of *L. regale*, but much more delicate in texture and earlier by two to three weeks. The color is variable, generally a soft apple-blossom pink but sometimes deeper and sometimes very pale or even pure white. The stem is slender and grows to 2 feet, bearing up to five blooms. It is not an easy, reliable lily. We have grown it very well, both in dry sandy soil and in moist woodland locations, but in both sites the soil was highly acid. Plant 4 to 5 inches deep.

Each \$1.20 Dozen \$13.00

KELLOGGII (California) A most attractive lily similar to *L. Martagon* in growth. The flowers are much more reflexed, are fragrant and pale pink in color with a yellow stripe through the center of each petal. They are finely spotted with maroon. Plant in partial shade in a loose woodland soil. Good drainage must be provided. Height 2 to 3 feet. June-July blooming period. Plant 5 to 6 inches deep. Each \$1.50 Dozen \$16.50

LEMON KING See Stooke's hybrids.

LILLIAN CUMMINGS See Preston hybrids.

LONGIFLORIUM, "The Estate Lily" This is probably the finest strain of *L. longiflorum* ever introduced. It far outstrips all other varieties in size, substance of flower, stature and ease of culture. Under glass the Estate Lily sends up strong five foot stems which carry from three to eight immense white trumpets fully 50% larger than the best imported varieties of *L. longiflorum*. The flowers last longer than those of any other variety of this lily. For those with greenhouses there is nothing finer to grow for early spring flowering. For outdoor culture it is an excellent trumpet lily for early August and hardy in New England. Plant 8 inches.

Each \$1.35 Dozen \$14.50

MARHAN A fine and vigorous hybrid between *L. Martagon album* and *L. Hansonii*. The lustrous orange of the petals overlaid with purple gives the effect of burnished copper. June. Height 4 to 5 feet. Plant 6 to 7 inches.

Stock limited.

Each \$4.00

MARTAGON ALBUM (Europe) We cannot too strongly urge that you plant this as it is one of the loveliest lilies in cultivation. It has delicate small Turk's Cap flowers, pure white and sweetly fragrant. It grows to about 4 feet tall and blooms toward the middle of June. Try it with peonies or with ferns. Plant 4 to 5 inches. Does well in heavy soil.

Each 75c Dozen \$7.50

MARTAGON-HANSONII HYBRIDS These include the Backhouse hybrids, *L. Dalhansonii*, *L. Guinea Gold*, and the Marhans.

MAXWILL A vigorous relatively disease-proof variety that establishes easily and grows prolifically. The 5 to 6 foot stem is luxuriantly leaved. The greatly recurved flowers hang from a pyramidal raceme and are, in color, a brilliant orange-red with black spots and long brick-red stamens. Late July. Plant 8 inches deep.

Each 75c Dozen \$8.00

MICHIGANENSE This lily is native to the middle west and botanists have not decided whether it is a distinct species or whether it is a natural hybrid of *L. canadense* and *L. superbum*. The color range is as variable as that of *L. canadense*, but the petals are more reflexed. Like *L. canadense* and *L. superbum* it is an excellent lily for the woodland garden since it likes partial shade and a fairish amount of moisture. Height 2 to 5 feet. July. Plant 6 inches deep.

Collected wild bulbs.

Each 50c Dozen \$5.50

MONADELPHUM See Szovitsianum.

MOSQUITO See Preston hybrids.

MRS. HENRY'S RARE NATIVE LILIES It is our privilege to present to American gardeners the native lilies discovered by Mrs. J. Norman Henry. The list will grow longer from year to year as additional varieties are ready for distribution.

A collection of eight of Mrs. Henry's new color series of *L. philadelphicum* was shown at the 1946 Lily Show of the Massachusetts Horticultural Society. They were given a Silver Medal as well as the Society's Award of Merit.



L. candidum

Photograph by T. H. Schuelke



L. centifolium hybrids

CANADENSE GOLDEN RULE A most chaste and beautiful lily. The pure golden yellow flowers are completely spotless and have golden yellow pollen. No lily is more exquisitely lovely than this one. **Each \$20.00**

CATESBAEI LONGII The rare northern form of *L. Catesbaei*. It is a dwarf lily. The beautiful flowers have long clawed petals that are "Coral Red" (Ridgway), shading to yellowish green at base with a few small dark spots. Collected several years ago by Mrs. Henry. This lily demands an acid soil composed solely of peat and sand.

Flowering size pot grown plants available. **Each \$10.00**

Four—3 year bulbs from seed. **Each \$5.00**

IRIDOLLAE Mrs. Henry's already famous "Pot of Gold Lily." A most remarkable and very beautiful new species of *Lilium*, discovered, collected, and grown by Mrs. Henry. The sweetly fragrant yellow flowers, often slightly stippled with pinkish red, are conspicuously spotted with dark brown in the throat. The pollen varies from bright mahogany red to yellowish brown. It is a Turk's cap Lily with well recurved segments. This lovely Lily reaches a height of over 6 feet in its native home in the south and carries as many as 8 or more blooms. In northerly climates with their shorter growing seasons, it may not grow so tall. At Gladwyne it blooms at about 3 to 4 feet in height. The slender stems carry oblanceolate leaves, typically in whorls and roughened on the margins and beneath the prominent veins. The upper leaves are small and so far apart as to give the upper portion of the stems a leafless appearance. The requirements of this exquisite Lily are a position in a sheltered spot and an acid sandy soil. Grown in this manner at Gladwyne it has survived five subzero winters out of doors with no mulch or protection of any kind. A full technical description of *Lilium iridollae* by Mrs. Henry appeared in *Bartonia* No. 24, published by the Phila. Bot. Club, Acad. Nat. Sci. Philadelphia, Pa. **Each \$100**

PHILADELPHICUM BLACK DIAMOND A wonderful and weirdly beautiful lily. The blood red flowers are heavily blotched with black from base to tip of petals.

Strong bulbs that may flower in 1947. **Each \$20.00**

PHILADELPHICUM BROWN BERRY An extremely handsome and unusual lily. With flowers of a light brown approaching dark old gold "Buckthorn Brown" (Ridgway) and dark spotting. Found by Mrs. Henry and her daughter Josephine. **Each \$20.00**

PHILADELPHICUM SUNLIGHT A glorious golden yellow flower of a very pure tone; the slight shading of a trifle deeper yellow towards the center gives it a velvety appearance.

Strong bulbs that may flower in 1947. **Each \$25.00**

SUPERBUM, var. MARY HENRY DAVIS This exquisite lily has flowers of a lovely and unusual shade of yellow, close to Ridgway's "Ochraceous Buff." The conspicuous dark spots show up well on the pale petals.

Mrs. Henry has named this distinctive lily for her daughter.

Each \$10.00

SUPERBUM, MRS. HENRY'S NEW VARIETY A splendid lily found in a Florida swamp six years ago. The coloring is much the same as *L. superbum*, but the longer, wide-spreading stamens give grace and distinction to the flowers. The leaves are much longer and narrower than the type and the stem is exceptionally rigid. It is a vigorous grower and reached a height of over 10 feet in its native home. It comes into bloom three or four weeks later than *L. superbum*. It was illustrated in 1942, "American Horticultural Society Lily Year Book" on page 91. It has withstood subzero winters without any protection. This new variety of *L. superbum* will be validly described in due time.

Each \$25.00

SUPERBUM, var. NORMAN HENRY This is a rare yellow form that was only recently discovered. It is a characteristic *L. superbum* with blooms of a clear, unshaded and unspotted butter yellow. The flowers are of splendid texture with a surface like fine panne velvet. It is in best form when gardens are apt to be rather bare, late July and early August. And it is, without question, one of the most valuable garden plants in the world today and, more than that, one of the loveliest.

Each \$30.00

SUPERBUM, var. PORT HENRY A handsome variety of *L. superbum* with flowers of a remarkable and striking color. From the tip to the base of the petals the flowers are a clear pale orange. There is no shading of any other color and the faint spotting is scarcely apparent.

Each \$10.00

MRS. R. O. BACKHOUSE See Backhouse hybrids.

PARADALINUM GIGANTEUM, The Sunset Lily A variety with a more vigorous constitution and even more brilliantly colored flowers. The prevailing color is rich vermillion passing to orange-red at the tips of the petals with a deep golden throat, thickly spotted with purple black spots. It requires no special culture.

Each 40c Dozen \$4.25

PARRYI Probably the loveliest of all American lilies and one of the most beautiful of the entire genus. The fragrant funnel-shaped flowers with slightly reflexed tips are a pleasing citron yellow faintly spotted purple brown. Like many of our West Coast plants this is not always an easy garden subject. "You can't just dump it down in any part of the garden." It needs plenty of humus, a moist and sheltered place, preferably in partial shade. The banks of a stream or that part of the garden where our native orchids will grow is the ideal location. A difficult lily but so beautiful as to be worth some extra attention. Early July flowering. Height 3 to 5 feet. Plant 5 to 8 inches.

Very choice bulbs.

Each \$1.50

Dozen \$16.50

PHILADELPHICUM (Eastern North America) One of our few upright flowering native lilies and one of the most brilliantly colored. The flowers are vivid orange scarlet with large dark maroon spots. A woodland lily which does best in acid soil, in partial shade where the drainage is especially good. Grows 1½ feet. Plant 5 inches deep. June to July flowering.

Each 25c Dozen \$2.75

PHILADELPHICUM BLACK DIAMOND See Mrs. Henry's Rare Native Lilies.

PHILADELPHICUM BROWN BERRY See Mrs. Henry's Rare Native Lilies.

PHILADELPHICUM SUNLIGHT See Mrs. Henry's Rare Native Lilies.

PRESTON HYBRIDS A group of splendid hybrids by Miss Isabella Preston of the Dominion Experimental Farm at Ottawa, Canada. Miss Preston has worked with lilies for years and we are indebted to her for many fine garden plants.

CORONATION One of Miss Preston's most outstanding achievements. The plant grows to three feet tall, is upright and well leaved and bears up to twenty or more somewhat pendant recurved blooms of a clear primuline yellow lightly spotted brown. The exterior of the petals is also a clear pale yellow. Like all of Miss Preston's hybrids this is a tested garden subject, of simple culture and vigorous habit. The color is completely delightful. Plant 6 to 8 inches. Stock limited.

Each \$2.75

MOSQUITO This is a recent seedling of L. Edna Kean with rather small flowers similar in color and shape to L. Davidi var. Willmottiae. The blooms are well spaced and are borne at right angles to the straight, sturdy stem, which grows to 4 feet. July flowering. Plant 5 to 7 inches deep.

Each \$2.75

SPITFIRE An open pollinated seedling of L. Edna Kean. The inflorescence is arranged like a candelabrum. Flowers are vase shaped, face upwards. The color is flame scarlet with some medium-sized bay spots. Pollen brazil red. Because of its distinctive and charming shape and ease of culture this is one of Miss Preston's most valuable contributions to the garden. Early July. Height 3 feet.

Each \$3.75

STENOGRAPHER SERIES:

BRENDA WATTS This is one of the very best garden lilies. It grows magnificently, establishes readily, and has a strong constitution. It is one of those happy garden subjects that knows its job and proceeds to do it thoroughly. Added to this is the bold and brilliant beauty of the plant itself — tall and graceful, bearing a long spike of outward-facing blooms, soft orange-red in color. For dignity of stature and a mass of sheer color in the July garden it is hard to surpass. Height 5 feet. Plant 6 to 8 inches.

Each \$1.50 Dozen \$16.50

EDNA KEAN Resembles *L. Brenda Watts* except for its color which is a deep cherry red, a color almost unique among lilies. It does not have quite the magnificent constitution of *Brenda Watts*, but will hold its own in nine gardens out of ten.

Each \$1.50 Dozen \$16.50

GRACE MARSHALL A fine hybrid with deep red, outward-facing, reflexed flowers. The plant grows from 4 to 5 feet, is wiry and erect and will carry up to thirty blossoms. Plant 6 to 8 inches deep in sun or part shade and in a well prepared soil.

Each \$1.50 Dozen \$16.50

LILLIAN CUMMINGS Another fine grenadine red hybrid. An extremely vigorous lily and an asset to any collection.

Each \$1.50 Dozen \$16.50

PRINCEPS A hybrid that developed from an accidental pollination of *L. Sargentiae* on *L. regale*. The late Dr. E. H. Wilson who discovered and introduced both of the latter felt their offspring was superior to either parent. The buds are long, as in *Sargentiae*, but the white rose-stained flowers are more open. It is larger than *regale* and has a better texture. It is a vigorous and lovely plant and blossoms from 10 days to 2 weeks after *regale* at a time when the mid-summer border is usually in very real need of a strikingly blossoming plant. Plant 8 to 10 inches deep.

Each 75c Dozen \$8.25

PRINCEPS PINK These are selected seedlings in which the deep rose and pink coloring of the reverse stains the interior of the petals, so that the entire bloom is suffused and flushed with pink. Developed by Carleton Yerex.

Each \$3.00

PYRENAICUM (Pyrenees) This dainty Turk's cap has flowers of light yellow spotted black and is heavily scented. While it is relatively difficult in this country it is easier to grow than some of the other European species. It likes a heavy, sweet loam in sun or partial shade and can be grown in a dry location. We have established it at Sandyloam in a light acid soil. Mid-June. Height 2 feet. Plant 5 to 6 inches deep.

Each \$1.50 Dozen \$16.50

REGALE (China) This beautiful and well-known white, trumpet-shaped lily should be in every garden. It will thrive for years, increasing in size and beauty with each passing season. July. Height 4 to 7 feet. Plant 7 to 11 inches deep.

Each 35c, 75c, \$1.00

Dozen \$3.75, \$8.25, \$11.00

Hundred \$30.00, \$66.00, \$88.00



L. concolor



L. Martagon Album

REGALE, FREIMANN'S PINK FORMS This is a new race of lilies, and one of the most important to be offered in many years. The plants and blooms are characteristic *L. regale* except for the color which is deep Ephyrite red on the exterior, with a flush of the same color in a somewhat paler shade over the ivory of the interior. Seen in massed plantings the color is almost identical with that of joe-pye weed. The seedlings are variable. In some blooms the color extends right down into the throat—in others the throat may be lemon yellow. These lilies are very vigorous, and reach four or more feet when well grown. Mid-July flowering. Plant 6 to 8 inches deep. Stocks very limited. Each \$3.50

RUBELLUM (Japan) A dwarf apple-blossom pink trumpet lily and one of the earliest to flower. The individual blooms are small, trumpet-shaped, and the color is invariably a clear delicate pink. The plant grows to 10 or 12 inches and flowers in late May or early June. It seems to prefer a slightly heavy soil with a high humus content, but is generally quite adaptable. Plant 4 to 5 inches deep. Each \$1.25 Dozen \$13.50

RUBESCENS (California and Oregon) The Redwood Lily is allied to *L. Washingtonianum*. Tall, slender stalks bear fragrant flowers of tubular shape; white, passing to purple with purple spots. Plant 8 to 10 inches deep in a partially shady position, in the shelter of shrubs or ferns. Best in gravelly soil containing leaf-mold. Late June. Height 3 to 5 feet. Each \$1.25 Dozen \$13.50

SARGENTIAE HORSFORD A splendid variation from the type in which the reverses are evenly stained with a deep garnet-red. The anthers are chocolate-brown. Each \$15.00

SATAN See *L. UMBELLATUM SATAN*.

SCOTTIAE A valuable hybrid from Canada which was produced in 1929 and received the RHS Award of Merit in 1932. The blooms face outwards and are of a bright salmon-orange shade spotted purple. A fine garden lily of easy culture. Height 2 to 3 feet. Plant 5 to 6 inches. June to July flowering. Each 75c Dozen \$8.00

SENECA A new hybrid by the distinguished American authority, Mr. George L. Slate, is a distinct and pleasing lily obtained by crossing *L. tigrinum* with *L. Leichtlinii* var. *Maximowiczii*. The flowers face outward, have reflexed perianth segments and are of a softer and more pleasing color than *L. tigrinum*. Mature plants bear 25 or more flowers, considerably more than *L. tigrinum* and bloom during the last three weeks in August, or two to three weeks later than that species. The plants grow to 5 or 6 feet and have very woolly stems and buds. *L. Seneca* grows well in a lime free sandy loam as well as a heavy clay loam containing much lime. The bulbs are small and should be planted 5 to 6 inches deep. Each \$2.00 Dozen \$22.00

SHUKSAN (Bellingham hybrid) One of the finest hybrids of American origin. On the tall wiry stems are tiers of gleaming jewel-like flowers of warm yellow, richly spotted reddish brown. In color and in pattern the surface might be compared to a leopard's skin. Vigorous and hardy and of easy culture — it should not be omitted from any planting. Mid-July. Plant 6 to 8 inches deep. Each \$1.00 Dozen \$11.00

SPECIOSUM (Japan) This is one of the most popular of all lilies. It comes late in the season, generally starts opening its frilly recurved flowers toward the end of August and carries well into September. Normally it grows to 4 feet. This season we offer the following varieties:

SPECIOSUM ALBUM A beautiful pure white form with a green-starred throat and coppery-brown anthers. September flowering. Each \$1.20, \$1.75 Dozen \$13.00, \$19.00

SPECIOSUM ALBUM NOVUM We consider this far and away the finest of the white forms of *L. speciosum*. It is a vigorous and easily grown plant. Its habit and the character and color of the blooms is very much better than in the commonly grown form *album*. The blooms are a clear brilliant white, and the pollen a beautiful shade of yellow, rather than the brown that is characteristic of *album*. Each \$3.50

SPECIOSUM MAGNIFICUM This form is characterized by its brilliant and lovely color. The deep crimson of the spotting flushes the entire surface of the petals, leaving only a slender border of white. Each \$1.25 Dozen \$13.50

SPECIOSUM PUNCTATUM An early form of *L. speciosum* that is distinguished from the type by its flowering period. by the graceful and vigorous character of the stem, the paler rose-pink color, and by the leaves which form two ranks on opposite sides of the stem. It is particularly valuable for northern gardens as it flowers from three to four weeks earlier than *Rubrum*. With us it is in bloom in late July and early August. In the more southerly gardens it will be in several weeks earlier.

Each \$1.50 Dozen \$16.50

SPECIOSUM RUBRUM This is the most widely grown and best known variety of *L. speciosum*. The flowers are white flushed and spotted with pink, ranging in shade from rose-pink to deepest carmine-pink. A hardy and strong growing plant. Each 85c, \$1.00 Dozen \$9.25, \$10.50

SPITFIRE See Preston hybrids.

STOOKE'S HYBRIDS The English specialist, Mr. J. E. H. Stooke, has been working for years with *L. croceum*, *Davidi* and *Willmottiae* and has produced a number of plants of splendid garden value. We imported several of these hybrids in 1940 and, as we have watched them grow and develop, have become most enthusiastic about them. Stocks of *L. Fire King*, one of the best of the group, are being held for propagation this season.

LEMON KING This lily is one of the loveliest introduced in many years. The blooms, which come in July, are fragrant, a clear lemon yellow, lightly spotted with purplish brown. The plant grows much like **Fire King**, is about three feet tall, and carries up to twenty blooms which "look at you." But the combination of color, size and shape of blooms, together with the wiry strength and delicacy of the plant give the hybrid a perfection that is completely unique.

Each \$20.00

SUPERBUM The native American Turk's cap is a great favorite with gardeners and is one of the finest of all lilies. The pendant blooms are large and sharply recurved, orange-red in color, tipped with deeper red, and heavily spotted with brown. It adjusts well to almost any location, full sun as well as partial shade, and is recommended for the border, for inter-planting in shrubbery and especially for naturalizing. It can stand more moisture than most lilies. The height of the plant varies from 4 to 8 or 9 feet depending on where it is planted. July flowering. Plant 8 to 10 inches.

Each 35c Dozen \$3.50

SUPERBUM, var. **MARY HENRY DAVIS** See Mrs. Henry's Rare Native Lilies.

SUPERBUM, var. **NORMAN HENRY** See Mrs. Henry's Rare Native Lilies.

SUPERBUM, var. **PORT HENRY** See Mrs. Henry's Rare Native Lilies.

SZOVITSIANUM (Caucasus) Related to *L. monadelphum* this lily is distinct from it in several respects from the gardener's point of view. The bell-shaped blooms are less reflexed, and a lighter color, being pale straw-yellow, freely spotted purplish-black. It is earlier to bloom, flowering for us in late May or early June, one of the first lilies in our garden. It grows from 3 to 5 feet, but seems to resent disturbance. It likes plenty of humus, but not too acid a soil, and is happy in half shade. Small bulbs which have flowered, but may take a year to establish.

Each \$1.85 Dozen \$20.00

T. A. HAVEMEYER SEEDLINGS The seedlings of **T. A. Havemeyer** are among the loveliest of August flowering plants. They range in color from ivory white through the pale golds to a deep warm yellow. The shape is somewhat variable. Some are of the open trumpet type while others are lovely nodding Turk's Caps. Most are as good as **Havemeyer** and some are better. Whatever their shape or color each one is a gem. Limited number available as stocks are being reserved for propagation.

Each \$3.00

TENUIFOLIUM (*Pumilum* is now the accepted name of this little Siberian lily). The charming Coral Lily is justly popular. It is an engaging little witch, one of the first to bloom, rarely more than 18 inches tall, with small Turk's Cap flowers of brilliant scarlet. It is not a true perennial, tending to be triennial, and it is just as well to start a few new bulbs each year to keep your planting intact. Plant 4 to 5 inches.

Each 30c Dozen \$3.25

FLOWERING CHART FOR LILIES

MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
<p>RUBELLUM ★ P</p> <p>MONADELPHUM -Y</p> <p>TENUIFOLIUM ★ R</p> <p>PYRENAICUM -Y</p> <p>TENUIFOLIUM GOLDEN GLEAM★O</p> <p>MARTAGON ALBUM ★ W</p> <p>UMBELLATUM W.N.CRAIG★★ Oy</p> <p>DAURICUM ★★ O</p> <p>SCOTTIAE★★ O</p> <p>CONCOLOR★★ R</p> <p>HANSONII★★ Y</p> <p>DALHANSONII★ B</p> <p>MRS. R.O. BACKHOUSE★★I</p> <p>CERNUUM ★ L</p> <p>JAPONICUM -P</p> <p>WASHINGTONIANUM -L</p> <p>PARRYI -Y</p> <p>BROCADE ★ I</p> <p>SCEPTRE★★L</p> <p>CANADENSE★★ O or Y</p> <p>UMBELLATUM GRANDIFLORUM★O</p> <p>ELEGANS LEONARD JOERG★★ Oy</p> <p>BROWNII ★ W</p> <p>FIRE KING ★★ R</p> <p>GUINEA GOLD ★★B</p> <p>MARHAN ELLEN WILLMOTT★B</p> <p>AMABILE★★O</p> <p>AMABILE LUTEUM★★Y</p> <p>CANDIDUM★W</p> <p>SCOTTIAE HYBRIDS★★ O-Y and R</p> <p>BRENDA WATTS★★R</p> <p>EDNA KEAN ★ R</p> <p>TSINGTAUENSE ★O</p> <p>UMBELLATUM MAHOGANY★★B</p> <p>TENUIFOLIUM RED STAR ★R</p> <p>ELEGANS ASTROSANGUINEUM★★R</p> <p>WILLMOTTIAE ★O</p> <p>TESTACEUM - A</p> <p>DAVIDII ★★ O</p> <p>REGALE ★★ W</p> <p>ELEGANS DOUBLE SCARLET★★R</p> <p>DUCHARTREI -W</p> <p>GRAYI ★ R</p> <p>GREEN MT HYBRIDS ★★ W</p> <p>PRINCEPS ★★ W</p> <p>CROW'S HYBRID ★★ W</p> <p>PARDALINUM GIGANTEUM★★R</p> <p>SUPERBUM ★ O</p> <p>UMBELLATUM MOONLIGHT★★Y</p> <p>CENTIFOLIUM ★ W</p> <p>MICHIGANENSE ★ O</p> <p>PHILADELPHICUM - R</p> <p>SPITFIRE ★ O</p> <p>CORONATION★Y</p> <p>SHUKSAN ★ Y</p> <p>AURELIANENSE SEEDLINGS★★I</p> <p>MAXWILL ★★ O</p> <p>DAURICUM WILSONII★★A</p> <p>AURATUM ★W</p> <p>CALLOSUM★★O</p> <p>SARGENTIAE -W</p> <p>TIGRINUM ★★ O</p> <p>DAURICUM PARDINUM ★★ A</p> <p>SPECIOSUM PUNCTATUM ★★ P</p> <p>FORMOSANUM EARLY ★ W</p> <p>HENRYI ★★ Oy</p> <p>T.A.HAVEMEYER★★I</p> <p>SULPHUREUM -W</p> <p>SPECIOSUM RUBRUM ★★P</p> <p>LONGIFLORUM, ESTATE LILY -W</p> <p>WARDII -P</p> <p>FORMOSANUM INTERMEDIATE ★W</p> <p>SENECA ★ O</p> <p>BROWNII KIUKIANG ★ W</p> <p>SPECIOSUM ALBUM ★ W</p> <p>FORMOSANUM LATE ★ W</p>					
<p>COLORS OF LILIES ARE SHOWN BY SYMBOLS GIVEN BELOW</p> <p>THESE LETTERS ARE PLACED AT RIGHT OF NAME</p> <p>A- APRICOT OY- ORANGE-YELLOW</p> <p>B-BROWN P- PINK</p> <p>I- IVORY TO PALE YELLOW R- RED</p> <p>L- LILAC W- WHITE</p> <p>O- ORANGE-RED Y- YELLOW</p> <p>BEST GROWERS ARE DOUBLED STARRED ★★</p> <p>GOOD GROWERS IN MOST GARDENS -THOUGH THEY MAY NEED REPLACEMENT FROM TIME TO TIME -ARE SINGLED STARRED ★</p> <p>THIS CLASSIFICATION INTO BEST GROWERS AND GOOD GROWERS IS MEANT TO BE SUGGESTIVE ONLY ONE OR TWO OF THE NEW LILIES ARE NOT WELL ENOUGH KNOWN TO BE ACCURATELY CLASSIFIED ALSO, GARDEN AND CLIMATIC CONDITIONS VARY SO THAT LILIES HAPPY IN ONE GARDEN MAY FAIL TO ESTABLISH IN THE NEXT; AND LILIES DIFFICULT IN ONE GARDEN MAY GROW LIKE WEEDS IN ANOTHER.</p> <p>THE FLOWERING PERIODS GIVEN ARE FOR CENTRAL VERMONT. THEY WILL HAVE TO BE ADJUSTED FOR GARDENS IN OTHER PARTS OF THE COUNTRY</p>					
MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER

TENUIFOLIUM GOLDEN GLEAM This lily is a rich glittering orange form of the well known *L. tenuifolium*. It is a splendid garden lily. Plant 4 to 6 inches. Bulbs offered this season are especially fine. Each 45c Dozen \$5.00

TESTACEUM (Hybrid) The beautiful Nankeen Lily is one of the choicest and most effective plants for the garden. Similar in growth to *L. candidum* but it bears heads of fragrant broad, recurved flowers of nankeen yellow, delicately flushed with palest pink. Unlike *L. candidum* the flowers form an open cluster at the very top of the stem and are pendulous. It is not particular as to soil, a good loam is most satisfactory and a little lime is beneficial. Bulbs should be planted shallow (4 inches) and early. Best grown in full sun, it also does well in partial shade but is more liable to injury from botrytis in the latter situation. As the color is so delicate it requires careful placing. As companions, pale blue delphinium, the deep purple of *L. Martagon Cattaniae*, or background of shrubbery have all been suggested. There have never been enough bulbs of this variety to meet the demand.

Each \$2.25 Dozen \$24.00

THE DUCHESS A striking new hybrid by Dr. F. L. Skinner developed from a cross of *L. amabile* on a yellow seedling of *L. dauricum*. The blooms open flat and face outward with a downward tilt. The color is a brilliant cadmium-orange, with a sheen to the petals that gives them a special brilliance. The plant grows to 3 feet, is vigorous, showy and prolific. We highly recommend it. Mid to late June. Plant 3 to 5 inches deep.

Each \$5.00

TIGRINUM, Mosaic-free The Tiger Lily is so well-known that it needs no description here. It is a magnificent August flowering lily and indispensable for the herbaceous border. We are pleased to offer the old New England type as it was brought here centuries ago by our sea captains. This is an especially vigorous form with dark rich green foliage and stems that seem to delight in their ability to grow and reach toward the sun. We consider it quite the finest form of *L. tigrinum* in commerce. Height 6 feet. Plant 5 to 8 inches.

Each 50c, 60c Dozen \$5.50, \$6.50

TSINGTAUENSE Somewhat resembles *L. concolor*, but is much more striking and vigorous. The broad rich green foliage grows in whorls around the stem as does the foliage of *L. Hansonii*. The individual blooms are a glossy lacquer red, upright, star-shaped with long fluted petals. This is one of the good new garden lilies, distinctive and adaptable. July. 3 feet. Plant 6 to 7 inches.

Each \$1.50 Dozen \$16.50

UMBELLATUM (European garden hybrids) The so-called Flame, Candlestick or Torch Lily of our gardens. They are distinguished from *L. dauricum* and *elegans* by stature and habit of growth. All bear umbels of upright, cup-shaped flowers in brilliant colors and nothing can compare with them when planted in groups in the border. They are of easiest culture, require no care and establish well, quickly forming good sized clumps. We list a group of distinct color and habit. Late June. Plant 5 to 6 inches.

GRANDIFLORUM The common form, a brilliant orange-red spotted with deeper red. Height 2½ feet.

Each 40c Dozen \$4.00

MOONLIGHT We are pleased to present this new hybrid which was recently developed by Mr. Louis Vasseur and awarded the First Class Certificate by the Massachusetts Horticultural Society in 1943. It is without question the outstanding pure yellow form of the entire cup-shaded group of lilies. The blooms are very large and widely opened with gracefully shaped petals. The color is the warm pale yellow of harvest moonlight. The reverse of the petals is delicately stained with apricot and there is a suggestion of this color on the tips, but unless examined closely this color is not visible. The general effect is clear soft gold, which is most striking against the deep rich green of the foliage. In the mass, or as an individual plant, this lily is one of the showiest possible garden subjects. The plant is vigorous, increases rapidly and is most floriferous. Height 3 to 4 feet.

Each \$1.75 Dozen \$19.00

SATAN A new clone developed by the outstanding American specialist, Mr. George L. Slate, and offered last season for the first time. The plant grows to 2½ feet, and bears up to four or five well-spaced blooms, a deep currant-red in color. One of our men, on seeing it for the first time said, "You couldn't find anything redder than that, nor greener than that, no matter how hard you looked." The individual blooms measure six inches across, with the petals in their natural position—not forced to gain extra spread. We expect this lily to replace all other deep red forms of *L. umbellatum* as soon as stocks are more generous. It is a good grower and increases rapidly in the garden. Each \$3.50

SELECTED SEEDLINGS This is a group of mixed seedlings also developed by Mr. George L. Slate. It is from these that he made his final selections for the series of new lilies that we are beginning to introduce this year. The first named clone is SATAN. Several others will be offered during the next few years. The **SELECTED SEEDLINGS** are not a chance group, but were carefully bred and those that are offered here are all so-called second bests. Almost any of them would be good enough to introduce as a new clone, but some of them are not sufficiently distinct from other lilies now in existence to warrant separate naming. Others of very fine quality are being discarded in favor of one of the slightly better named clones. The color range is pale yellow to orange, through flame, to deep blood red. A very few of them have outright-facing, wide-open, or reflexed blooms. Any of them is a first-rate addition to the garden. It is not possible for us to select from this group in terms of color or shape, but you may be certain that each plant will be both striking and distinctive.

Each \$1.00 Dozen \$10.50

VIOLET NILES WALKER Mr. Louis Vasseur considers this his finest seedling. It is a clear unspotted lily of vivid persimmon orange, with slightly deeper shadings towards the center of the petals. The plant grows to 18 inches and bears from five to six wide-open blooms that measure six inches across. It holds its glowing color well in full sun or light shade and flowers at about the same time as W. N. CRAIG.

Each \$7.50

W. N. CRAIG We are pleased to present this new hybrid by Mr. Louis Vasseur. It is a striking and graceful plant carrying up to six blooms of a clear unspotted orange-yellow. The petals are slender and so well spaced that most forms of *L. umbellatum* seem coarse by comparison. It is a vigorous plant that grows 2 to 2½ feet and is among the first of the *umbellatum* to flower. It is named in honor of Wm. N. Craig and was awarded the First Class Certificate of the Massachusetts Horticultural Society in 1943.

Each \$2.50 Dozen \$26.00

VIOLET NILES WALKER See *L. UMBELLATUM* **VIOLET NILES WALKER.**

WASHINGTONIANUM var. **PURPUREUM** Like many other West Coast lilies this beautiful variety of *L. Washingtonianum* will not succeed without due care and rarely will it grow good heads the first season after planting. Do not be impatient. Plant in gravelly soil in a partially shaded position with a good mixture of leaf-mould and — if you see that the drainage is perfect — you will be rewarded with handsome stems of fragrant white flowers suffused and dotted with a deep wine-purple.

American nursery grown bulbs. Each \$1.25 Dozen \$13.50

WILLMOTTIAE See *L. Davidi* var. *Willmottiae*.



The Martagon-Hansonii hybrids in a woodland setting



L. japonicum

LILIES FROM SEED

As we have had many requests for seed we have arranged to offer a limited number of varieties. Seeds should be planted about $\frac{1}{2}$ inch deep and may be sown in the open, but can be controlled more readily if planted either in a cold frame, or in flats in the house. The species starred (*) should germinate in from a month to six weeks—the others are slow and though they germinate underground will not show their first growth above ground until the second summer. A light mulch of sphagnum or peat moss is helpful in maintaining an even soil moisture. During the last two years we have had marked success in growing lilies from seed in the sterile artificial soil, **SANDYLOAM SEED STARTER**, with **LIQUA-VITA** as a food. See page 22.

Seeds of the following are priced at 25c per packet and the number of seeds in each packet varies according to the rarity of the species. While hybrid lilies do not come true from seed, it should be noted that the possibilities in such a packet are most fascinating for the gardener.

*amabile	*longiflorum
*amabile luteum	
auratum	*Maxwill
auratum platyphyllum	michiganense
Backhouse hybrids	nepalense
Brownii colchesteri	
	Parryi
canadense	*princeps
*centifolium	
cernuum	*regale
columbianum	*regale hybrids
*concolor	
*Crow's hybrids	*Sargentiae
	Shuksan
*dauricum var. Wilsoni	speciosum rubrum
*Davidi	speciosum punctatum
*Davidi var. Willmottiae	superbum
	Szovitsianum
*formosanum	
*formosanum, Pricei	*tenuifolium
	*tenuifolium Golden Gleam
giganteum	tsingtauense
*Green Mt. hybrids	
	*umbellatum grandiflorum
*Henryi	
	Wallichianum
japonicum	Washingtonianum

In addition to the above we offer seed of:

- ***L. centifolium** hybrids from one of our fine West Coast hybridizers. This is hand pollinated and is carefully selected to give a wide range of color and form. Small packet 50c

GARDEN MATERIALS HELPFUL IN GROWING LILIES

HORMODIN POWDER NO. 1

At Sandyloam we find Hormodin No. 1 most helpful in establishing all lilies and we especially recommend that bulbs of any rare, expensive or slightly difficult lily be dusted before they are planted. The old roots should be clipped before dusting and new roots will establish quickly.

¼ oz. package, each 25c.

1 ¾ oz. package, each 50c.

SPERGON

A number of disinfectants are in use for the prevention of both basal rot and damping off. We find Spergon a shade better than most and also the handiest to use. It is a fine yellow powder with which bulbs susceptible to basal rot should be dusted before planting.

2 oz. bottle, 45c.

PENETROL

A new compound that acts as both spreader and sticker when mixed with Bordeaux. It causes the spray to adhere for weeks even through wet weather. It can also be used with nicotine solutions for the control of aphids. Used at the rate of one pint to fifty gallons of water, or one teaspoon to two quarts of water. Full directions on bottle.

1 qt. bottle, 75c.

1 gal. bottle, \$1.75.

SANDYLOAM SEED STARTER

A specially treated pulverized mica, completely sterile and retentive of moisture, and one of the most satisfactory media in which to start young plants. It is especially helpful in avoiding damping off and basal rot, both of which are fairly prevalent in the average seed-bed. With careful feeding, young bulbs can be grown in the Starter until such time as the gardener is ready to place them in the open, or even until they reach flowering size, if desired.

5 lb. bag, \$1.00.

10 lb. bag, \$1.85.

LIQUA-VITA

Specially prepared liquid fertilizer which contains all of the important food elements for seedlings and growing plants together with small amounts of the so-called minor ones. It is preferable to most other fertilizers in that all of the elements are soluble and easily absorbed by the plants. Full directions on package. Recommended for use with SANDYLOAM SEED STARTER.

8 oz. bottle, 45c.

32 oz. bottle, \$1.25.

1 gal. bottle, \$4.00.

Prices not prepaid on the above five garden materials.

CULTURAL NOTES

When lilies are healthy and find a place in the garden that they like, they thrive.

Most lilies like partial shade at some point during the day. A very few of them actually prefer full sun and an even smaller number like heavy shade. These are noted in the text. Almost all like a ground cover of some sort that will shade the ground in which they are growing but will leave the stems free to rise up into the sun.

Good locations are various. The perennial border offers excellent growing conditions for most species. Lilies are happy when interplanted with peonies, iris and other plants. Almost all of them are effective and do exceptionally well when planted in isolated groups against the shrubbery. The taller ones are happy and effective within light shrubbery. A rather large group lend themselves to naturalization and the woodland garden.

A good friable loam with plenty of humus is the best soil. Do not be afraid to feed. Bonemeal, well rotted manure or compost can be worked into the beds. A mulch of manure and commercial fertilizer is excellent if applied in fall so that the food will work down into the ground during the winter. Manure can also be applied as a summer mulch if desired and is best if used either at or after the time of flowering. Manure should not be used on those varieties of lilies labeled capricious or those highly subject to basal rot.

The majority of species are best if fall planted, so we strongly urge purchasing at that time. Bulbs are lifted and shipped as soon as they are ready. Some mature early in August, others not till mid-November. If the bulbs are going to arrive late in the season and there is danger that the ground might be frozen at the time, it is recommended that it be mulched with leaves, straw or boughs to keep it open. After the bulbs are planted the mulch should be replaced so the ground temperature will reach freezing gradually.

Planting depth for lilies should be three times the vertical diameter of the bulb. This distance is measured from the bottom of the bulb. There are five exceptions to the general rule: the two European lilies, *L. candidum* and *L. testaceum*, which have no stem roots, are planted a few inches below the surface; and the three Indian lilies, *L. cathayanum*, *L. giganteum* and *L. cordatum* are planted with the tip of the bulb at the surface. In the rare situations where the ground water level is very close to the surface more shallow planting is indicated. However, it is also true that lilies have a tendency to find their own depth and that the depth varies from location to location; consequently, the depth at which the bulbs are placed is somewhat flexible. We have seen an entire bed of *L. pardalinum* work itself up from ten to twelve inches to three or four inches from the surface, because the bed where they were growing was periodically flooded and the shallower planting met their requirements. Likewise, in another bed of *L. auratum*, where the bulbs were set only six or seven inches below the surface, we found on digging that they had pulled themselves down to from eighteen to twenty-four inches.

Good drainage is essential. Do not attempt to plant lilies where they must stand in water for any length of time as this will be conducive to rot.

There are certain problems connected with the growing of all garden plants and lilies naturally have their share. The following discussion deals with these and with the means by which they can be controlled.

SPRING FROSTS

Occasionally late spring frosts raise havoc, especially when they follow an early warm good growing period. Those lilies that tend to start into growth very early as do *L. regale*, *L. Hansonii*, and the Martagon-Hansonii hybrids are naturally most liable to injury. On this account we recommend a good winter mulch over these lilies in areas liable to late frosts. The mulch tends to keep the bulbs dormant in spring so that when they emerge and the buds show, danger of frost injury is pretty well past. If manure, peat moss, leaves, straw or pine needles are used this material may be left on through the summer, thus working into the soil and adding humus content. If boughs or similar material is used it should be left on as late as possible. Lilies planted through perennials or light shrubbery are fairly well protected by the foliage of these surrounding plants.

BOTRYTIS

Botrytis is troublesome in some localities. This is the fungus that forms brown spots on the leaves during damp weather, particularly in spring and early summer. Attempts to control it are primarily for the sake of appearance. Unless the condition is serious the bulbs are not affected though they may not achieve their full growth for the following year. In districts where it is prevalent, those districts having extended damp weather in spring, preventive measures are recommended. A spray or dust of Bordeaux¹ applied early will help to ward off an attack. This should be repeated whenever the weather is damp. Lilies especially susceptible to Botrytis should be planted, if possible, where the foliage has an opportunity to dry off. Morning sun and a gentle breeze are helpful. This group includes *L. candidum*, *L. testaceum*, *L. chalcedonicum*, *L. canadense*, and *L. Hansonii*. *L. candidum* is probably the worst offender. With this lily the spores of the fungus are carried through the winter on the basal leaves that form in autumn. By spring these leaves have served their function and can be removed and burned if there is a tendency to Botrytis in the garden.

MOSAIC

Mosaic has been the most widely discussed of the troubles affecting lilies. We are going to treat it at some length here because so much of the popularly published information on the subject has been both impractical and misleading.

Mosaic is a virus that affects a few lilies seriously, some slightly and many not at all. There is no known cure. Perhaps some day the research pathologists will find one. Frankly, we do not feel it is nearly so serious as it has been generally painted, since it is quite easy to detect, comparatively easy to "live with" and can be well controlled by proper selection and spacing of varieties in the garden. The gardener who has a bit of space so that his lilies are interplanted with other perennials and mayhap some shrubbery will have little or nothing to worry about.

Recently we visited the garden of one of our customers who had phoned us to come and see her *L. auratum* which were "eight feet tall growing up into the apple tree." This garden is a very simple illustration of the success possible through thoughtful planning. The whole area is rather small; it is well broken by light shrubbery and perennials; and in the same garden are Madonnas and *speciosum magnificum* both infected with mosaic, less than twenty feet from Regals, Tigers and *auratum* which are clean and have remained clean in this supposedly dangerous company for the last five years.

¹ See Penetrol on page 22.



L. superbum var. Norman Henry



L. Szovitsianum

For the gardener's convenience we are classifying the more important varieties according to their susceptibility to mosaic:

Group I

The first group consists of a number of fine standard garden lilies which always have mosaic. One or two have had it for hundreds of years. In spite of this they are all splendid plants that delight their owners year after year.

<i>L. candidum</i>	<i>L. chalcedonicum</i> (with rare exceptions)
<i>L. elegans</i>	<i>L. princeps</i> , George C. Creelman
<i>L. testaceum</i>	<i>L. T. A. Havemeyer</i>
<i>L. umbellatum</i> (old forms)	<i>L. tigrinum</i> (with rare exceptions)

Group II

The second group, at the other extreme as to susceptibility, consists of those lilies that resist infection to the point where they can be safely considered immune.

<i>L. Brownii</i> (type)	<i>L. Martagon</i> (all forms)
<i>L. giganteum</i>	<i>L. pardalinum</i> (all forms)
<i>L. Hansonii</i>	The <i>Martagon-Hansonii</i> hybrids

Group III

The third group is liable to infection but does not acquire it readily and tends to survive for a number of years in the garden, though the plants will gradually deteriorate somewhat and may finally die out.¹

<i>L. regale</i>	<i>L. Maxwill</i> ¹
<i>L. tenuifolium</i>	<i>L. sulphureum</i> ¹
<i>L. Willmottiae</i> ¹	<i>L. monadelphum</i> ¹
<i>L. Henryi</i> ¹	<i>L. Szovitsianum</i> ¹
<i>L. cernuum</i>	All of the Preston, Stooke's and Bellingham hybrids ¹

Group IV

The fourth group consists of those lilies that are most highly susceptible to infection and rarely survive more than a single season when infected.¹

<i>L. auratum</i>	<i>L. japonicum</i>
<i>L. canadense</i> ¹	<i>L. superbum</i> ¹
<i>L. formosanum</i>	

These classifications while an invaluable guide to the gardener are somewhat artificial. Actually the two hundred odd varieties and species of lilies run the whole gamut from susceptibility to immunity and within each classification there is considerable range in regard to immunity. This is particularly true of Group IV in which *L. auratum*, *L. formosanum*, and *L. japonicum* are the most highly susceptible that we know, while *L. canadense* and *L. superbum* can stand a fairish amount of exposure. Now and then we find individual clones that show a real degree of resistance.

Mosaic is spread from one plant to another ONLY by means of a small group of sucking and chewing insects. It does not travel through the air or soil. Aphis are the principal culprits. The farther north one

¹ Those designated are less susceptible than the others within the given group. Also, individual plants within Groups III and IV may prove relatively resistant.

goes the fewer aphids one finds. At Sandyloam we have none. We believe that our only mosaic carrier is the potato leaf hopper. The insect carriers are almost invariably wind blown or crawling and consequently do not tend to travel very far, not more than 30 to 50 feet in the garden.

With this knowledge as a basis the gardener can order and plant his lilies with more understanding and with relative safety and confidence. Lilies from Groups I and II are completely reliable. They will never perish from mosaic, and they can be planted any place without fear as to their susceptibility.

The lilies in Group III can be ordered with a good deal of confidence. They are all of them first rate garden lilies and even if infected with mosaic will be excellent garden plants for many, many years. However, if a particular gardener wishes any one of this group of lilies in very special form, with a maximum of height and floriferousness he should buy clean bulbs, which we offer, and plant them at some distance from the lilies in Group I.

Group IV is a quite different story. This small group has in it the lilies we must guard. If they were not so exquisite they would not warrant the special attention they require. But *L. auratum* and *L. japonicum* are so beautiful that most gardeners feel that the extra effort necessary to grow them well is justified. And too, their price is not so high but replacement is feasible every few years. If these lilies are to last in the garden more than a year or two they must be kept at a safe distance from all lilies except those in Group II. A distance of 30 to 50 feet from infected plants is recommended. (This you will remember is as far as the carriers are apt to travel in the garden.) The group does especially well when planted alone against shrubbery.

It is our opinion that the average gardener will find it very much simpler to plan his plantings in terms of getting along with mosaic than it will be for him to try to eliminate it altogether. Our own losses from mosaic are always negligible because we follow the cultural program we recommend for the gardener. But we do have some losses now and then and the gardener in turn should expect to have to make some replacements from time to time. We use every precaution to see that the bulbs that we send out are clean. We isolate by planting in the woodland and we spray regularly with nicotine sulphate to control the carriers. When you order lilies from us from Groups II, III, and IV you may expect clean bulbs, though we have not felt justified in issuing a blanket guarantee that they are mosaic-free. That would require laboratory testing of every individual bulb before shipment. Most of the lilies in Group I that have had mosaic throughout their history, the Madonnas probably from Biblical times, are infected in our plantings. But while every dooryard Tiger and umbellatum has mosaic and thrives indefinitely, we are slowly building up some clean stocks of these particular lilies for the handful of mosaic-free gardens which exist in this country.

BASAL ROT

Though basal rot has been recognized for many, many years it is still little understood even by the specialist. Fortunately it attacks only a limited number of lilies, and we are now learning that prevention and control are possible through disinfection and careful attention to good cultural practices. It is a kind of rot that starts either on the roots of the lily or at the basal plate and works up through the bulbs causing the scales to drop off and fall away. It is possible that it may

be present in the soil in which the bulbs are planted. It is possible that it may be present on bulbs when they arrive from the nursery and it is also possible that some slight bruise or injury that occurs during packing or mailing or handling in the garden may be responsible. As a precaution against basal rot's developing we disinfect all bulbs before shipment, but this does not preclude their acquiring the disease, though it is a very real safeguard.

We feel that the current habit of shipping bulbs with the roots intact is not helpful and may sometimes be harmful, as these roots rarely survive and take hold again in their new home but only tend to rot once they are in the soil. In some varieties that are not susceptible to basal rot the presence or absence of roots is relatively unimportant. However, in our experience those lilies liable to basal rot are much less apt to acquire infection if the roots are clipped before the bulb is replanted. If they are removed, Hormodin or any of the standard rooting powders will help the bulb to quickly form new and healthy roots. Dusting with Spergon is an added precaution.

In the matter of basal rot there is a subtle factor worthy of mention. The purple form of *L. Martagon* which is native to Europe thrives in European gardens and is apparently not subject to basal rot. In this country the purple *Martagon* is a different story. There is no lily more susceptible to basal rot, even when it has been grown from seed here. The white *Martagon*, which is native to the same areas in Europe, thrives in both European and American gardens. These illustrations could be repeated many times with other well known varieties. All we can say is that in a certain environment a given lily tends to thrive—or the reverse. No one has as yet been able to put his finger on just what occurs. This will, of course, be an area for some future research.

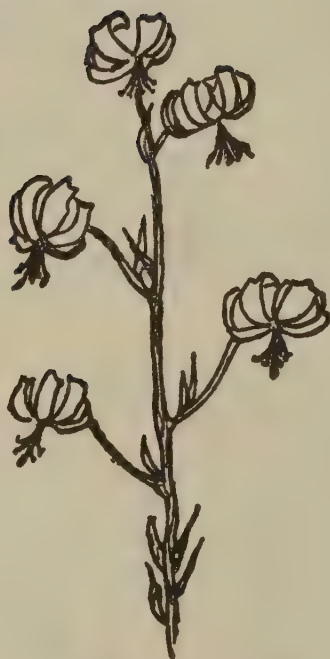
In addition to *L. Martagon* type, the following lilies are especially susceptible to basal rot in American gardens: *L. chalcedonicum*, *L. testaceum*, *L. croceum*, *L. pardalinum*, *L. Humboldtii*, some of the *Bellingham* hybrids, *L. pyrenaicum*, *L. formosanum*, and *L. speciosum*.

It may be of interest to note that basal rot is probably the principal factor responsible for the serious losses that frequently occur in seedling lilies.¹

¹ See *Lilies From Seed* on page 21, and *Sandyloam Seed Starter* on page 22.



UPRIGHT LILY



MARTAGON LILY



TRUMPET LILY

TYPES OF LILY BLOOMS



L. umbellatum



L. Washingtonianum

CLASSIFICATION OF THE LILIES LISTED

Lilies may be roughly classified into three main groups:

- (1) Upright or umbellatum.
- (2) Turk's Cap or martagon.
- (3) Trumpet.

Within each classification there is an almost endless variation in size, shape, color and flowering season. If we take each of the three in turn we shall get a somewhat clearer picture of the lilies that compose a given group.

UPRIGHT LILIES

L. umbellatum is typical in shape and flowering habit of most members of the family. It is illustrated in the pen sketch on page 28 and in the plate opposite page 28. The colors are largely in the red, orange, vermillion, apricot and yellow tones. Purples, pinks and whites are excluded. The season starts in late May with various forms of *L. dauricum* and ends in mid-August with *L. dauricum pardinum*. Most of the orange-red umbellatum lilies are familiar but the yellows, the apricots and the dark reds are not quite so widely known and have a distinct charm.

These lilies differ from all others in their stature and height, rarely attaining 3½ feet while many are as dwarf as eight inches. The combination of the height with the broad brilliantly colored upright blooms makes them extraordinarily effective for mass planting either in the herbaceous border or against shubbery.

MARTAGON LILIES

Turk's Cap lilies are illustrated in the pen drawing on page 28 and in the plates of *L. amabile*, *L. Martagon album*, and *L. superbum* Norman Henry. They all have pendant flowers more or less recurved, tend to grow in clumps and have a rather slender wiry stem. They run the entire gamut of color from the pure white and pale pinks through the various yellows, the orange reds, the vermillions, the scarlets, the deep reds; through the lovely orchid tones of *L. cernuum* to the deep purple, almost black, of *L. Martagon Cattaniae*. The season starts in May with the eighteen inch *L. tenuifolium* and closes with a five foot form of *L. speciosum* in October.

TRUMPET LILIES

The trumpet lilies are a group unto themselves. Here too there is considerable variation in color, size and flowering period.

When one thinks of lilies the dazzling display given by the great group of white trumpets comes first to mind. There are a number of these and they are deservedly popular. Some of them should be included in every garden and their uses are many—in the herbaceous border, in clumps along or through the shrubbery—in banked masses against the green of a clipped hedge or the warm grey of a stone wall—naturalized along the edge of a woodland or in clearings of the open woodland. We have even used them to festoon a difficult and unattractive slope and the grace of the stems as they bend down to greet the passerby is more than charming. See the pen sketch on page 28, and plates of *L. candidum*, *L. giganteum*, *L. Green Mt. hybrids*, and *L. sulphureum*.

1947

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REMARKS—

NORTH AMERICAN LILY SOCIETY

About thirty persons interested in promoting the culture of lilies met in Horticultural Hall in Boston, Mass., on July 9, 1947 and organized the North American Lily Society. The organization meeting was sponsored by the Lily Committee of the American Horticultural Society of Washington, D. C., and met in Boston at the invitation of the Massachusetts Horticultural Society, which was holding its annual Lily Show at that time. The American Horticultural Society for the past eight years has been sponsoring work with lilies and has published four American Lily Yearbooks. The new society will publish annual Yearbooks, organize field days, promote lily exhibits and encourage research on lily problems.

The society is country wide in scope, including the United States and Canada. Membership is open to any person, who is interested in promoting the culture of lilies. Provision is made for the organization of regional groups within the Society and for the affiliation of garden clubs and other societies interested in lily culture.

At the meeting a constitution and by-laws were adopted and officers elected for the coming year.

The officers elected are as follows:

President—Dr. L. H. MacDaniels, Cornell University, Ithaca, N. Y.

Vice President—Mr. E. F. Palmer, Director, Horticultural Experiment Station, Vineland Station, Ontario, Canada.

Secretary—Dr. Norma E. Pfeiffer, Boyce Thompson Institute, Yonkers, N. Y.

Treasurer—Dr. Philip Brierley, Plant Industry Station, Beltsville, Md.

Elected directors:

Mr. Alan Macneil, North Springfield, Vermont.

Prof. Victor Ries, Dept. of Horticulture, Ohio State University, Columbus 10, Ohio.

Appointed directors:

Mrs. Harrison P. Bresee, Orange, Virginia.

Mr. Jan de Graaff, Sandy, Oregon.

Dr. S. L. Emsweller, Plant Industry Station, Beltsville, Md.

Mrs. M. J. Fox, Foxden, Peekskill, New York.

Mrs. J. Norman Henry, Gladwyne, Pennsylvania.

Mrs. Wallace A. Rowell, 5537 15th Avenue S., Minneapolis, 7, Minn.

Dr. F. L. Skinner, Dropmore, Manitoba, Canada.

Mr. Donald Stryker, Langlois, Oregon.

Dr. Albert M. Vollmer, 313 Lansdale Avenue, San Francisco, Calif.

Dues in the new society are \$3.00 for annual membership, \$5.00 or more for sustaining membership and \$50.00 for life membership. Inquiries regarding the society can be sent to the secretary and applications for membership should be sent to the treasurer.

